

REMARKS

Claim 1 has been amended to eliminate redundancy between the plunger stopper and the plunger part, thereby obviating the requirement to submit a corrected drawing showing these as separate parts.

The specification has been carefully reviewed and amended for clarity. In particular, the word "silicon", when used alone, has been changed to silicone. Where used with "lubricant" or "oil" it has not been changed. As pointed out previously, the term silicon lubricant, as used herein, is synonymous with silicone.

The specification has been amended to refer to U.S. Patent No. 6,296,893 and 5,009,646, which correspond to foreign documents already cited and discussed. The '893 patent uses the term "silicone" throughout, which should make it clear that this was meant in the present application as filed. Copies of these patents are submitted herewith to provide basis for the amendment, but are not to be considered as an untimely information disclosure statement.

Claims 1-15 stand rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. More particularly, the examiner takes the exception to the amendatory language reciting the stopper as "immovably fixed" completely within the elongate hollow body. Accordingly, the claim has been amended to use the language that the stopper "occupies a fixed position" completely within the hollow body. This is consistent with the language at page 8, and clearly means that the stopper occupies a fixed position during normal use, which does not preclude movement during assembly.

The amendment to claims 1-15 also addresses the rejection under 35 U.S.C. §112, second paragraph. This is, the redundant recitation of a longitudinally displaceable plunger stopper and a longitudinally displaceable plunger part has been deleted, so that only the latter is recited.

Claims 1-4, 14 and 15 stand rejected under 35 U.S.C. §102 as being anticipated by Hersee U.S. 2,761,447. To the extent that this rejection would be applied to claim 1 as presently amended, it is traversed for the reasons following.

Hersee discloses a hollow body having two inside diameters, with the smaller inside diameter toward the first end. Therefore, when the plunger part 36 is in a position toward the second end, it does not contact the hollow body. Applicants' claim 1, on the other hand, recites that the plunger part contacts the hollow body at all positions of the plunger part in the hollow body.

Claims 1, 3, 4 and 9 stand rejected as being anticipated by Van Dyke U.S. 6,413,236. This patent discloses a syringe having a hollow body with a two-part sealing stopper in the second end. This is, a first part 34 engages the inside of the hollow body, and a second part 36 is necessary to provide a seal with the plunger rod 60. This is considerably more complex than the one-piece sealing stopper disclosed and claimed by applicants.

Claims 1, 3, 4 and 9 stand rejected as anticipated by Gibbs U.S. 6,482,187. This patent is only available as a reference under 35 U.S.C. §102(e), because its U.S. filing date is later than applicants' priority date. However it is believed that this reference can be distinguished without rendering it unavailable by submitting a certified translation. Gibbs discloses a plunger part comprising a body 18 and a pair of rubber O-rings, seated in grooves on the body, which contact the inner wall of the hollow body. There is no suggestion that the plunger part be made of a lubricious plastic which contacts the hollow body.

The dependent claims are believed to patentably distinguish from combinations of references including Hersee, Van Dyke, and Gibbs for like reasons as the primary references.

Claims 1, 3, 4, 9, 13 and 14 stand rejected under 35 U.S.C. §103 as being unpatentable over Taylor et al. in view of Kopunek et al. U.S. 4,776,704 in view of Hersee. To the extent that this rejection would be applied to claim 1 as amended, it is traversed for the reasons following.

Taylor discloses a hollow body fitted with an elastomeric sealing stopper 34 which receives therethrough a plunger rod made of plastic. The plunger rod is fitted with an elastomeric plunger part 14. Here too there is no suggestion that the plunger part be made of a lubricious plastic to improve the gliding properties of the plunger part. An elastomeric material such as rubber is not the same as a lubricious plastic such as PTFE. While an elastomer provides good sealing properties, it does not provide good gliding properties. Therefore, it is often used with silicone lubricant, which the present invention seeks to avoid.

Only applicants disclose and claim a metering receptacle which recognizes that good sealing is only necessary in the storage condition of that prefilled metering receptacle. See page 5, lines 8-12. That is, when the plunger part is against the sealing stopper, a good seal is necessary and is provided by the structure according to the invention. Once the plunger rod is moving, sealing is no longer critical during the brief moment of injection. Therefore, the invention provides a highly simplified construction which provides for sealing in the storage condition while permitting easy sliding of the plunger. In particular, the circumferential sealing lips on the side of the plunger part facing the stopper (claim 12) facilitate the sealing in the storage condition, particularly when the stopper is an elastomeric plastic.


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The claims as amended being definite and patentable over the art of record, withdrawal of the rejections and early allowance are solicited. If any objections remain, a call to the undersigned is requested.

It is believed that no further fees or charges (except the enclosed extension fee) are required at this time in connection with the present application; however, if any additional fees or charges are required at this time, they may be charged to our Patent and Trademark Office Deposit Account No. 03-2412.

Respectfully submitted,

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